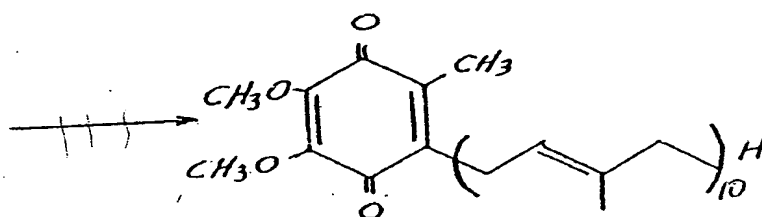


I Claim:

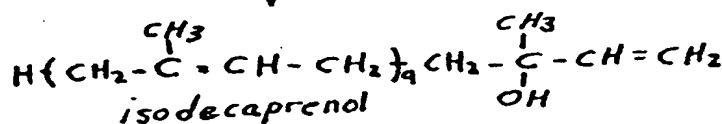
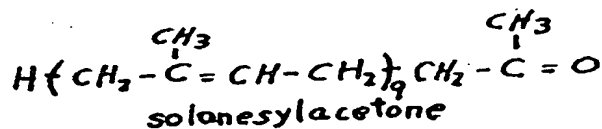
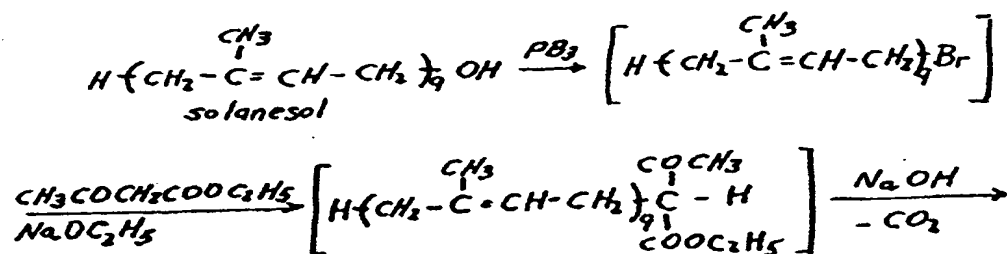
1. A stereospecific synthesis of optically pure trans (E) isomer of coenzyme Q 10 having the formula



Ubiquinone

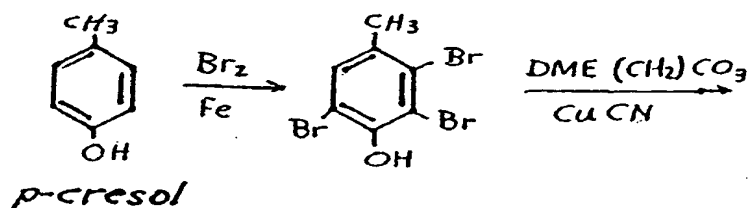
which comprises extracting solanesol from tobacco dust and using said solanesol as the starting material for carrying out the following sequence of reactions

Solanesylacetone

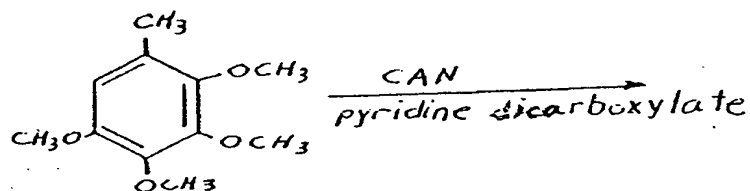


separately carrying out the following reactions:

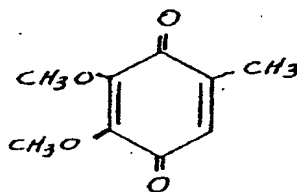
2,3,6 - Tribromo- 4 - methylphenol



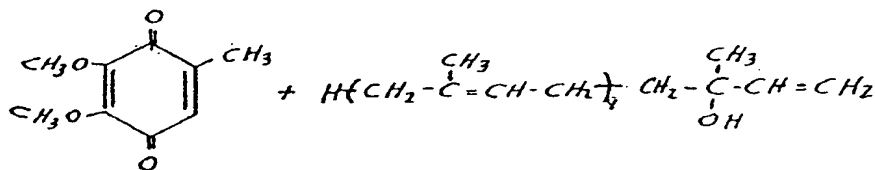
2,3,4,5 - Tetramethoxytoluene



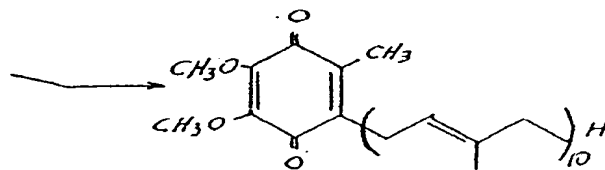
2,3 - Dimethoxy- 5- methylhydroquinone



thereafter reacting the isodecaprenol and 2,3-dimethoxy-5-methyl-hydroquinone to form the optical pure ubiquinone



2,3-dimethoxy-5-methylhydroquinone isodecaprenol



Ubiquinone

2. Method of treating impaired or damaged tissue in humans and animals ^{to improve blood flow and reduce heart stress} which comprises administering a composition comprising as the principal active ingredient a therapeutically effective amount of optically pure trans (E) isomer of coenzyme Q 10 (2,3 - dimethoxy - 5 - methyl - 6 - decaprenyl - ^γbenzoquinone) in admixture with a pharmaceutically acceptable carrier.
3. The method of claim 2 wherein said composition is administered orally.
4. The method of claim 3 wherein said composition is administered in an amount of 15-400 mg pro die.
5. The method of claim 3 wherein said composition is administered in an amount of 100-200 mg pro die.
6. The method of claim 3 wherein said composition is administered in an amount of 15-30 mg pro die.
7. The method of claim 3 wherein said composition is in tablet form.
8. The method of claim 3 wherein said composition is in liquid form.
9. The method of claim 2 wherein said composition is administered by topical application.
10. The method of claim 9 wherein said composition contains the optically pure coenzyme Q 10 in an amount of 0.1-10%.
11. The method of claim 9 wherein said composition contains the optically pure coenzyme Q 10 in an amount of 0.25-1%.

12. The method of claim 9 wherein said composition is to be used as a cosmetic and said optically pure coenzyme Q 10 is present in an amount of 0.0001 to 0.1%.
13. The method of claim 2 wherein said pharmaceutically acceptable carrier is a vegetable oil.
14. The method of claim 9 wherein said composition is formulated as a paste, cream, ointment, gel, lotion or unguent.
15. The stereospecific optically pure trans (E) isomer of coenzyme Q 10 produced by the process of claim 1.